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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,215	09/28/2005	Dock-Man Kang	2003KR301	4259
26289 7590 11/09/2007 AZ ELECTRONIC MATERIALS USA CORP. ATTENTION: INDUSTRIAL PROPERTY DEPT. 70 MEISTER AVENUE SOMERVILLE, NJ 08876			EXAMINER CHU, JOHN S Y	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 11/09/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,215	Applicant(s) KANG, DOEK-MAN	
	Examiner John S. Chu	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to the application filed September 28, 2005.

Claim Objections

1. Claim 1 is objected to because of the following informalities: The term "naphtoquinonediazide" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by HSIEH et al (5,068,568).

HSIEH et al anticipates the recited organic solvent developer comprising benzyl alcohol in column 9, Example 12.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over HOSAKA et al (6,228,554) and/or SHIMOKAWA et al (5,432,039).

The claimed invention is drawn to the following:

1. A resist composition comprising an alkaline soluble novolak resin, a naphthoquinonediazide photosensitive compound and an organic solvent, characterized in that the organic solvent comprises benzyl alcohol or its derivatives.
2. The resist composition according to claim 1, characterized in that the organic solvent comprises 1 % by weight to 35 % by weight of benzyl alcohol or its derivatives.
3. A photosensitive resist composition comprising an alkaline soluble acrylic resin or novolak resin, a strong acid or a radical generating compound by irradiating UV ray, a crosslinker and an organic solvent, characterized in that the organic solvent comprises benzyl alcohol or its derivatives.
4. The resist composition according to claim 1, characterized in that the organic solvent comprises 1 % by weight to 35 % by weight of benzyl alcohol or its derivatives.

HOSAKA et al discloses a radiation sensitive resin composition wherein the formulation is dissolved in a solvent mixture of a monooxymonocarboxylic acid ester compound, i.e. methyl oxypropionates and ethyl oxypropionates. Applicants are directed to column 2, lines 56-62 wherein the monooxymonocarboxylic acid ester can include an additional solvent in the mixture at preferably less than 30%.by weight of the mixture. The specific solvents are recited in column

3, lines 1-14 which includes among the list a benzyl alcohol, thus the use of benzyl alcohol in photoresist compositional mixtures as a high boiling solvent is known in the art.

SHIMOKAWA et al also discloses a photoresist composition comprising a mixture of a quinone diazide compound and a novolak resin. The solvents used to dissolve the compositional ingredients include those found in column 11, lines 24 – 65 wherein a first solvent is disclosed and included is a second high boiling solvent which lists benzyl alcohol as an appropriate solvent.

The compositions found in HOSAKA et al and SHIMOKAWA et al have high storage stability and which sensitivity, respectively as taught in the references.

It would have been *prima facie* obvious to one of ordinary skill in the art of photoresist compositions to include a benzyl alcohol component as a high boiling solvent in resist composition with the reasonable expectation of improved storage stability of the composition as well as the sensitivity and resolution as disclosed in HOSAKA et al and SHIMOKAWA et al.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. HOSAKA et al (6,270,939), NISHIMURA et al (6,399,267) and HIROSE et al are cited of interest and are cumulative to the use of a high boiling solvent as a mixture in the photoresist composition.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

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The fax phone number for the USPTO is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John S. Chu/
Primary Examiner, Group 1700

J.Chu
November 7, 2007